

U. S. PTO Customer No. 25280

Case #3043A

AMENDMENTS TO THE SPECIFICATION:

Replace the paragraph commencing at page 1, line 16, with the following amended paragraph.

B₁

--The present invention relates to a passenger airbag or airbag cushion which simultaneously exhibits a very low amount of fabric utilized to produce the target airbag cushion in correlation to an overall high amount of available inflation airspace within the cushion itself. These two correlative elements are combined in what is defined as ~~an effective~~ fabric usage index or factor (being the quotient of the amount of fabric utilized in the construction of the airbag cushion and the available inflation airspace volume) and a fabric weight index or factor (being the ~~quotent~~ quotient of the total weight of fabric utilized in the construction of the airbag cushion and the available inflation airspace volume). A cushion exhibiting low seam usage, fabric weight factor, and fabric usage factor and also comprising an integrated looped pocket for the disposition of an inflator can is also provided as well as an overall vehicle restraint system including the inventive airbag cushion.--

Replace the paragraph commencing at page 7, line 10, with the following amended paragraph.

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-- To achieve these and other objects and in accordance with the purpose of the invention, as embodied and broadly described herein, the present invention provides an airbag cushion having at least one fabric component, wherein said airbag cushion possesses ~~an effective~~ a fabric usage factor of less than about 0.0330, more preferably less than about 0.020 and a fabric weight factor of less than about 8.0, more preferably less than about 3.0. The ~~effective~~ fabric usage factor is ~~derived from an effective fabric usage index which concerns (and is defined as)~~ is the quotient of the total amount of fabric utilized to manufacture the airbag cushion (measured in square meters) over the total volume of available inflation airspace within the airbag cushion (measured in liters). In order to exhibit a sufficiently low ~~effective~~ fabric usage factor, the amount of fabric must be very low with a correspondingly high available inflation airspace volume. The fabric weight index or factor is defined as the ~~quotent~~ quotient of the total weight of fabric utilized in the construction of the airbag cushion and the available inflation airspace volume. Of course, this airspace volume will be the same for each factor since the

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measurements of the factors (~~seam usage, fabric usage and fabric weight~~) are made for the same bag. Such an airbag cushion may comprise at least two separate fabric panels or a single panel with portions which require connection (preferably through the utilization of at least one substantially straight seam). The inventive bag is able to provide high available inflation airspace volumes due to the particular configurations of the used fabric panels or portions. The configurations permit more efficient utilization of fabric webs by cutting panels from the webs and producing less waste of unused fabric. The preferred embodiment is discussed in greater detail below.--

Replace the paragraph commencing at page 8, line 8, with the following amended paragraph.

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-- The ~~effective~~ fabric usage factor (~~as defined within the correlating seam usage index formula, above~~) for the inventive airbag cushion then is preferably less than about 0.0330, more preferably less than 0.030, still more preferably less than 0.028, even more preferably less than 0.026, yet more preferably lower than 0.023, and most preferably lower than 0.020. Thus, the volume of available inflation airspace within the airbag cushion should be as great as possible with the amount of fabric utilized reduced to its absolute minimum while still providing sufficient protection to a passenger in an automobile during a collision event.--

Replace the paragraph commencing at page 8, line 16, with the following amended paragraph.

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-- The ~~effective~~ fabric weight factor (~~as defined within the correlating seam usage index formula, above~~) for the inventive airbag cushion then is preferably equal to or less than about 8.0, more preferably less than 7.0, still more preferably less than 6.0, even more preferably less than 5.0, yet more preferably lower than 4.0, and most preferably lower than 3.0. Thus, the volume of available inflation airspace within the airbag cushion should be as great as possible

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with the weight of fabric utilized reduced to its absolute minimum while still providing sufficient protection to a passenger in an automobile during a collision event.--

Replace the paragraph commencing at page 8, line 25, with the following amended paragraph.

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-- A driver-side airbag will generally comprise a low amount of utilized fabric but also does not provide a correlative high volume of available airspace; and the prior art passenger-side airbags require large amount of fabric. Although the available inflation airspace volume in such passenger-side airbags is rather large, the total amount of utilized fabric is too large to meet the aforementioned preferred effective fabric usage or weight factors ~~within that index~~. The inventive cushion therefore is relatively easy to manufacture, requires very low sewing, or similar type, attachment operations of its fabric panel components, requires very low amounts or weight of fabric, but is also configured to provide an optimum large amount of available inflation airspace for maximum protection to a passenger during a collision event.--

Replace the paragraph commencing at page 9, line 12, with the following amended paragraph.

B₆

-- The present invention also provides in at least one embodiment an airbag cushion possessing the required effective fabric usage factor which also comprises a looped pocket for introduction of the inflator can of an inflator assembly. The most preferred embodiment includes two mirror-image body panel sections adapted to be joined by two substantially straight seams along corresponding lateral boundary edges. Any boundary segments of the body panels which are not joined to one another are joined around the perimeter of a, preferably, rectilinear panel by a series of short, substantially straight seams. Such a configuration thereby forms a looped

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Bp pocket in the airbag as well as an overall inflatable cushion structure. The airbag itself need not be created from two mirror-image body panel sections as any configuration of fabric panels will function properly in this invention as long as a three-dimensional inflatable cushion is formed during an inflation event and a looped pocket is created in the airbag in which the at least the inflator can of an inflator assembly is disposed.--

Replace the paragraph commencing at page 22, line 18, with the following amended paragraph.

B7 -- Clearly, the inventive bags, which possess the same available inflation airspace volume and front fabric panel area as the comparative prior art commercially available cushions (bags), require much less in the way of total fabric utilization, which thus correlates into overall much lower ~~effective~~ fabric usage factors. Furthermore, as noted above, in standard crash tests, these inventive bags (cushions) either performed as well as or outperformed their commercially available, more expensive, counterparts.--